

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A data transmission system for carrying out a serial data transmission based on IEEE 1394 standard, the system comprising:

an interface control semiconductor integrated circuit for controlling the serial data transmission, the interface control semiconductor integrated circuit including a plurality of protocol circuits and a plurality of switches associated with the respective protocol circuits, each of the switches performing a switching between supply and shut-off of a clock; and

determination means for obtaining 1394-control-information, which includes a type of data to be transmitted, from the interface control semiconductor integrated circuit and making a determination whether to supply or shut off the clock with respect to each of the protocol circuits based on the type of data to be transmitted, which is included in the 1394-control-information,

wherein each of the switches performs the switching based on the determination of the determination means.

2. (Original) The data transmission system of claim 1, wherein the interface control semiconductor integrated circuit includes:

a clock control register for holding control information on the switches; and

a clock selector for controlling operation of the switches based on the control information, and

the determination means updates the control information held in the clock control register, based on the determination.

3. (Previously presented) The data transmission system of claim 1, wherein the 1394-control-information is a number of nodes on an IEEE 1394 bus, and

the determination means makes the determination based on the number of nodes.

4. (Original) The data transmission system of claim 1, wherein the 1394-control-information is a packet transmitted on an IEEE 1394 bus, and

the determination means analyzes the packet and makes the determination based on a result of the analysis.

5. (Previously presented) The data transmission system of claim 1, wherein the determination means makes the determination to supply the clock to one of the protocol circuits engaged in the data transmission, after a first packet has been sent or received in a transaction in which the data transmission is requested to begin, at the earliest.

6. (Previously presented) The data transmission system of claim 5, wherein the determination means makes the determination to supply the clock, after a last packet has been sent or received in the transaction.

7. (Previously presented) The data transmitting system of claim 1, wherein the determination means makes the determination to shut off the clock with respect to one of the protocol circuits engaged in the data transmission, before a last packet is sent or received in a transaction in which the data transmission is requested to end, at the latest.

8. (Previously presented) The data transmitting system of claim 7, wherein the determination means makes the determination to shut off the clock, before a first packet is sent or received in the transaction.

9-11. (Cancelled)

12. (Currently amended) A protocol circuit controlling method for controlling protocol circuits in an interface control semiconductor integrated circuit for controlling a serial data transmission based on IEEE 1394 standard,

the method comprising:

a determination step of making a determination whether to operate each of the protocol circuits or not, based on a type of data to be transmitted, which is included in 1394-control-information obtained from the interface control semiconductor integrated circuit; and

a control step of controlling a switching between operation and non-operation of each of the protocol circuits based on the determination in the determination step.

13. (Previously presented) The method of claim 12, wherein the 1394-control-information is a number of nodes on an IEEE 1394 bus, and in the determination step, the determination is made based on the number of nodes.

14. (Original) The method of claim 12, wherein the 1394-control-information is a packet transmitted on an IEEE 1394 bus, and

in the determination step, the packet is analyzed so that the determination is made based on a result of the analysis.

15. (Previously presented) The method of claim 12, wherein in the determination step, the determination to operate each of the protocol circuits is made, after a first packet has been sent or received in a transaction in which the data transmission is requested to begin, at the earliest.

16. (Original) The method of claim 15, wherein in the determination step, the

determination to operate each of the protocol circuits is made, after a last packet has been sent or received in the transaction.

17. (Previously presented) The method of claim 12, wherein in the determination step, the determination not to operate each of the protocol circuits is made, before a last packet is sent or received in a transaction in which the data transmission is requested to end, at the latest.

18. (Original) The method of claim 17, wherein in the determination step, the determination not to operate each of the protocol circuits is made, before a first packet is sent or received in the transaction.

19. (Currently Amended) A data transmission system for carrying out a serial data transmission, the system comprising:

an interface control semiconductor integrated circuit for controlling the serial data transmission, the interface control semiconductor integrated circuit including a plurality of protocol circuits and a plurality of switches associated with the respective protocol circuits, each of the switches performing a switching between supply and shut-off of a clock; and

determination means for obtaining a packet transmitted by the interface control semiconductor integrated circuit and analyzing the packet, which includes a type of data to be transmitted, to make a determination whether to supply or shut off of the clock with respect to each of the protocol circuits based on the type of data to be transmitted which is included in the packet,

wherein each of the switches performs the switching based on the determination of the determination means.

20. (Currently amended) A protocol circuit controlling method for controlling protocol circuits in an interface control semiconductor integrated circuit for controlling a serial data

transmission,

the method comprising:

an obtaining step of obtaining a packet transmitted by the interface control semiconductor integrated circuit;

an analyzing step of analyzing the packet, which includes a type of data to be transmitted;

a determination step of making a determination whether to operate each of the protocol circuits or not, based on ~~an analyzing result of the packet~~ the type of data to be transmitted, which is included in the packet; and

a control step of controlling a switching between operation and non-operation of each of the protocol circuits based on the determination in the determination step.